

IN THE CLAIMS

1. (Cancelled)

2. (Currently amended) ~~The device of claim 1, further comprising a~~
semiconductor memory device comprising:
a voltage level detector configured to sense a voltage and configured to generate a
power-up signal while the voltage is less than a minimum voltage required to operate the
device;
a ready/busy driver controller configured to generate a busy enable signal in response
to the power-up signal;
a ready/busy driver that is responsive to the busy enable signal; and
a command register ~~cooperatively~~ coupled to an input of the ready/busy driver
controller.

3. (Currently amended) The semiconductor memory device of claim 2, wherein
the command register comprises:
a program command register configured to provide a program busy signal to the
ready/busy driver controller; and
an erase command register configured to provide an erase busy signal to the
ready/busy driver controller.

4. (Currently amended) The semiconductor memory device of claim 3, wherein
the program busy signal indicates that the memory device is in a program mode.

5. (Currently amended) The semiconductor memory device of claim 3, wherein
the erase busy signal indicates that the memory device is in an erase mode.

6. (Currently amended) The semiconductor memory device of claim 1, wherein
the ready/busy driver controller comprises:
a control signal generator configured to generate a first and a second control signal in
response to the power-up signal; and
a level shifter configured to generate the busy enable signal in response to the first
and second control signals.

7. (Currently amended) The semiconductor memory device of claim 1, wherein the ready/busy driver comprises:

- a ready/busy pin;
- an open drain driver configured to set a voltage at the ready/busy pin in response to the busy enable signal; and
- a pull up load connected to the ready/busy pin.

8. (Currently amended) The semiconductor memory device of claim 7, wherein the memory device is in a busy state during a power-up period when the voltage at the ready/busy pin is at a low state.

9. (Currently amended) The semiconductor memory device of claim 8, wherein the memory device is in a ready state after the power-up period.

10. (Cancelled)

11. (Previously presented) A semiconductor memory device comprising:
a voltage level detector configured to generate a power-up signal;
a ready/busy driver controller configured to generate a busy enable signal in response to the power-up signal; and
a ready/busy driver that is responsive to the busy enable signal;
wherein the ready/busy driver controller comprises:
a control signal generator configured to generate a first and a second control signal in response to the power-up signal; and
a level shifter configured to generate the busy enable signal in response to the first and second control signals.

12. (Previously presented) A semiconductor memory device comprising:
a voltage level detector configured to generate a power-up signal;
a ready/busy driver controller configured to generate a busy enable signal in response to the power-up signal; and
a ready/busy driver that is responsive to the busy enable signal;
wherein the ready/busy driver controller comprises:
a ready/busy pin;

an open drain driver configured to set a voltage at the ready/busy pin in response to the busy enable signal; and
a pull up load connected to the ready/busy pin.

13. (Currently amended) The semiconductor memory device of claim 12, wherein the memory device is in a busy state during a power-up period when the voltage at the ready/busy pin is at a low state.

14. (Currently amended) The semiconductor memory device of claim 13, wherein the memory device is in a ready state after the power-up period.

15. (Currently amended) A semiconductor memory device comprising:
a voltage level detector configured to generate a power-up signal;
a ready/busy driver controller configured to generate a busy enable signal in response to the power-up signal;
a ready/busy driver that is responsive to the busy enable signal; and
a command register ~~cooperatively~~ coupled to an input of the ready/busy driver controller.

16. (Currently amended) The semiconductor memory device of claim 15, wherein the command register comprises:
a program command register configured to provide a program busy signal to the ready/busy driver controller; and
an erase command register configured to provide an erase busy signal to the ready/busy driver controller.

17. (Currently amended) The semiconductor memory device of claim 16, wherein the program busy signal indicates that the memory device is in a program mode.

18. (Currently amended) The semiconductor memory device of claim 16, wherein the erase busy signal indicates that the memory device is in an erase mode.

19. (Currently amended) A method of operating a semiconductor memory device, the semiconductor memory device including a voltage level detector, a ready/busy driver controller, a ready/busy driver, and a command register, the method comprising:

sensing a voltage with the voltage level detector;

generating a power-up signal with the voltage level detector when the voltage is less than a minimum voltage required to operate the semiconductor memory device; and

generating a at least one busy signal with the command register, the at least one busy signal indicative of an operational state of the semiconductor memory device; and

generating a busy enable signal with the ready/busy driver controller in response to the power-up signal and the at least one busy signal.

20. (Currently amended) The method of operating a semiconductor memory device of claim 19, wherein generating a busy signal comprises generating a program busy signal.

21. (Currently amended) The method of operating a semiconductor memory device of claim 19, wherein generating a busy signal comprises generating an erase busy signal.

22. (Currently amended) The method of operating a semiconductor memory device of claim 19, further comprising generating a busy enable signal with the ready/busy driver controller, the busy enable signal generated when at least one chosen from the group consisting of the power-up signal and the busy signal is at a logic high state.